

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 16, line 1 with the following paragraph:

On manufacture of a QC sample the concentration c_{qc} , the ratio s_2/s_1 denoted $Q_{qc}[[ref]]$ and an initial wavelength shift $\Delta\lambda_{qc}$ may be determined by a reference spectrophotometer. The initial wavelength shift of the QC sample emerges mainly from a variation in the composition of the solvent of the dye in the QC sample.

Please replace the paragraph beginning at page 16, line 9 with the following paragraph:

A label, such as a bar-code label, a magnetic label, etc, may be attached to each of the QC samples containing one or more of the values c_{qc} , $Q_{qc}[[ref]]$ and $\Delta\lambda_{qc}$ in question. Alternatively one or more of the values may be printed in a bar code on a paper sheet following a set of QC samples. The values appearing on the labels or paper sheet are designated assigned values.

Please replace the paragraph beginning at page 16, line 17 with the following paragraph:

During quality control of a specific spectrophotometer, the assigned values of c_{qc} , $Q_{qc}[[ref]]$ and $\Delta\lambda_{qc}$ are read by the spectrophotometer and the values are stored in its memory. Then the spectrum of the QC sample is determined and s_1 , s_2 , and $\Delta\lambda$ are determined as previously described. The determined values for $Q_{est} = s_2/s_1$, $\Delta\lambda$ and c_{est} are also calculated and compared to the assigned values of $Q_{qc}[[ref]]$, $\Delta\lambda_{qc}$ and c_{qc} , respectively.

Please replace the paragraph beginning at page 16, line 26 with the following paragraph:

A possible dilution of the QC sample may be determined from a difference between Q_{est} and $Q_{qc}[[ref]]$, and the combined effect of dilution and deviations in length d of the light path through the cuvette may be determined from a difference between c_{est} and c_{qc} .

Please replace the paragraph beginning at page 30, line 17 with the following paragraph:

QC samples are, preferably, manufactured in lots, which may comprise 40,000-50,000 samples. The lot values of c_{qc} , $Q_{qc}[[ref]]$ and $\Delta\lambda_{qc}$ are, preferably, determined during manufacturing by measuring 5-10 samples on 3 reference oximeters. The oximeters have been adjusted to report exact parameter values on a standard blood sample.

Please replace the paragraph beginning at page 30, line 24 with the following paragraph:

Average values of each of the measured parameters c_{qc} , $Q_{qc}[[ref]]$ and $\Delta\lambda_{qc}$ are calculated and preferably stored on a bar-code label attached to each of the QC samples.

Please replace the paragraph beginning at page 30, line 28 with the following paragraph:

During a quality control procedure of an oximeter in normal operation, e.g. at a hospital, the values of c_{qc} , $Q_{qc}[[ref]]$ and $\Delta\lambda_{qc}$ are read from the bar-code label of the QC sample by a bar-code reader and stored in the memory of the oximeter.

Please replace the paragraph beginning at page 33, line 24 with the following paragraph:

If there is a difference between c_{est} and c_{qc} , and the value of $Q_{qc}[[ref]]$ being equal to Q_{est} , the difference between the estimated concentration and the reference concentration values may be caused by a difference between the light path length d_0 of the cuvette as calculated during calibration and the reference value d_{ref} of the length determined during manufacture.

Please replace the paragraph beginning at page 33, line 32 with the following paragraph:

If there is a difference between c_{est} and c_{qc} , the value of $Q_{qc}[[ref]]$ being different from Q_{est} , the sample may be diluted. A dilution causes the concentration of the dye to be smaller than C_{ref} and further causes a shift in the chemical equilibrium between the components s_1 and s_2 which causes the value of Q_{est} to deviate from $Q_{qc}[[ref]]$.